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**BEFORE THE ARIZONA CORPORATION COMMISSION**

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ARIZONA CORPORATION COMMISSION  
JAN 18 2002

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*[Signature]*

IN THE MATTER OF U S WEST  
COMMUNICATIONS, INC.'S COMPLIANCE  
WITH § 271 OF THE  
TELECOMMUNICATIONS ACT OF 1996.

DOCKET NO. T-00000A-97-0238

**QWEST'S POST-WORKSHOP BRIEF  
REGARDING STAND-ALONE TEST  
ENVIRONMENT ISSUES**

Qwest Corporation submits this brief regarding issues Hewlett-Packard Company's evaluation of Qwest's Stand-Alone Test Environment and related issues raised at the workshop.

**I. INTRODUCTION**

Hewlett-Packard Company ("HP") evaluated Qwest's Stand-Alone Test Environment ("SATE") in conjunction with the Arizona Corporation Commission's ("Commission" or "ACC") test of Qwest's operational support systems ("OSS"). The SATE evaluation was not conducted pursuant to the Master Test Plan ("MTP") or the Test Standards Document ("TSD") that govern the principal OSS test, but was conducted as a separate evaluation. HP conducted the SATE evaluation at the direction of the ACC Staff, pursuant to a separate testing plan that was approved by the ACC Staff.

After conducting a comprehensive evaluation of SATE pursuant to the plan approved by Staff, HP concluded that "SATE is adequate to support Qwest CLEC testing in the State of

Arizona, given current levels of CLEC usage."<sup>1</sup> Although the CLECs admit that HP conducted a thorough, detailed evaluation, they attacked HP's conclusion at the workshop simply because they disagree with it. The CLECs' arguments are based on two faulty contentions: (1) SATE does not exactly replicate Qwest's production environment, and (2) HP's evaluation should have been even more rigorous. The CLECs' claims are groundless because, as more fully discussed below, the Federal Communications Commission ("FCC") has specifically rejected the notion that a test environment must exactly replicate the production environment. Further, Qwest's SATE passed a more rigorous test than was conducted on any test environment that the FCC has found to be adequate to date.

As set forth below, HP's evaluation demonstrates that Qwest's SATE satisfies the factors considered by the FCC in evaluating a BOC's test environment for section 271 purposes.

## **II. BACKGROUND**

Beginning on July 31, 2001, Qwest has offered SATE to CLECs for certifying their system interfaces with Qwest's IMA-EDI production interface system and for testing new releases of IMA-EDI software. Qwest makes test data available to CLECs and provides support teams to assist in testing and certifying CLEC interface software. The test environment mirrors the production environment to the extent possible and is physically separate from the production environment.

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<sup>1</sup> Hewlett-Packard Company's SATE Summary Evaluation Report for Qwest IMA-EDI SATE, Final Release Version 2.0, dated December 21, 2001 ("HP SATE Summary Report"), at § 2.1.

SATE contains an exact copy of the IMA-EDI business processing layer, meaning that it contains precisely the same rules for processing transactions as IMA-EDI.<sup>2</sup> Thus, SATE returns the same error messages as the IMA-EDI interface returns to CLECs. In addition to error messages from the IMA-EDI interface, CLECs may also encounter in the production environment error messages that originate in Qwest's back-end systems. Accordingly, Qwest incorporated into SATE the most common of these error messages that CLECs are likely to encounter. Qwest advised HP regarding its approach to determining which common back-end system error messages to include.<sup>3</sup> Because only the most common error messages from back-end systems were included in SATE, Qwest has agreed to provide additional information about error messages generated by back-end systems that CLECs may encounter less frequently. In order to provide only the relevant error messages that may be returned to CLECs through IMA-EDI, Qwest will compile a list of the error messages that may be generated from any legacy system that returned error messages through Qwest's 8.0 IMA-EDI production interface during a six month period.<sup>4</sup> Qwest will publish that list to the CLECs and discuss it in the Change Management Process forum to assess the value of maintaining the list on a going-forward basis.

Qwest has implemented management and control procedures to ensure that SATE accurately reflects the business processing layer of the IMA-EDI production interface, including a change control board to ensure that code changes to the production interface are also made in

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<sup>2</sup> Transcript of OSS Final Report Workshop 5, dated December 12, 2001 ("SATE Workshop Transcript"), at 48:22-49:10.

<sup>3</sup> SATE Workshop Transcript at 51:11-14.

<sup>4</sup> See Qwest's Responses to HP's SATE Recommendations at 6.

SATE and a process to ensure that behaviors discovered during testing of back-end systems are documented and replicated in SATE, if appropriate.<sup>5</sup>

CLECs have used SATE to test OSS changes prior to implementation. To date, three entities have successfully completed testing using SATE and six others are currently testing through SATE.

### III. ARGUMENT

#### A. SATE "adequately mirrors" Qwest's production environment.

As an initial matter, it is important to note that the FCC does not require that a BOC's test environment undergo third party testing as a prerequisite for section 271 relief. Indeed, in the *SWBT Texas Order*,<sup>6</sup> the FCC specifically rejected AT&T's assertions that the absence of third party test of SWBT's test environment was a basis for concluding that SWBT's section 271 application was deficient.

Further, contrary to the CLECs' assertions, the FCC does not require that a test environment exactly replicate the production environment. In the *SWBT Texas Order*, the FCC specifically rejected AT&T's argument that, in order to obtain relief pursuant to section 271, a BOC must provide a testing environment that is identical to its production environment.<sup>7</sup> Instead, the FCC determined that a test environment must be adequate to allow CLECs "to test adequately OSS changes prior to their implementation as long as the testing and production

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<sup>5</sup> SATE Workshop Transcript at 99:4-16, 101:11-18.

<sup>6</sup> *Application by SBC Communications Inc., Southwestern Bell Telephone Company, and Southwestern Bell Communications Services, Inc. d/b/a Southwestern Bell Long Distance Pursuant to Section 271 of the Telecommunications Act of 1996 To Provide In-Region, InterLATA Services In Texas*, CC Docket No. 00-65, Memorandum and Opinion Order, FCC 00-238 (rel. June 30, 2000) ("*SWBT Texas Order*"), at ¶ 135.

<sup>7</sup> *SWBT Texas Order* at ¶ 138.

environments perform the same key functions."<sup>8</sup> The FCC describes this as a requirement that the test environment must "adequately mirror" the production environment.<sup>9</sup> The FCC eliminated any question on this issue by expressly acknowledging that, although differences existed between SWBT's testing and production environments, the testing environment was nonetheless sufficient for section 271 purposes: "Thus, despite any differences between the testing and production environments, the totality of the evidence indicates that SWBT's testing environment is adequate."<sup>10</sup>

More specifically, the CLECs argued that SATE is defective because orders do not flow through SATE and post-order responses are manually generated. These claims are baseless. AT&T made and lost these same arguments in opposing SWBT's section 271 application for Texas.<sup>11</sup> After expressly recognizing that SWBT's "test environment does not test flow through or response times, but only evaluates application functionality," the FCC rejected AT&T's argument and found that SWBT's test environment was adequate.<sup>12</sup>

Here, HP has found that Qwest's SATE is adequate to support CLEC testing in Arizona.<sup>13</sup> Nothing more is required.

**B. HP's SATE evaluation is more comprehensive than evaluations of SWBT's or Bell Atlantic's test environments.**

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<sup>8</sup> *SWBT Texas Order* at ¶ 138.

<sup>9</sup> *Application by Bell Atlantic New York for Authorization to Provide In-Region, InterLATA Service in the State of New York*, CC Docket No. 99-295, Memorandum Opinion and Order, FCC 99-404 (rel. Dec. 22, 1999), ¶ 119; *SWBT Texas Order* at ¶ 134.

<sup>10</sup> *SWBT Texas Order* at ¶ 138.

<sup>11</sup> *SWBT Texas Order* at ¶ 136.

<sup>12</sup> *SWBT Texas Order* at ¶ 138.

<sup>13</sup> HP SATE Summary Report at § 2.1.

As noted above, the FCC does not require third party evaluations of test environments. In fact, SWBT's testing environment was evaluated only through the use of commercial data; no third party evaluation was conducted.<sup>14</sup> Nonetheless, the FCC has granted SWBT's section 271 applications in Texas, Kansas, and Oklahoma.

Bell Atlantic's testing environment was evaluated by KPMG. That evaluation consisted of transactional testing, verification and validation that the test environment adequately resembles the production environment, and verification that CLECs were notified of changes to the test environment. In contrast, HP's evaluation of Qwest's SATE is much more extensive. Like KPMG, HP conducted transactional testing, evaluation of whether SATE adequately mirrors the production environment, and verification that CLECs are notified of changes to SATE. However, those evaluations are only part of the comprehensive evaluation HP performed, which addresses the following issues:<sup>15</sup>

- Does the documentation, published and made available to Co-Providers via the Qwest Interconnection web site for IMA EDI interface development, provide information that is accurate, sufficient to Co-Providers' needs, and effective in supporting the Co-Providers' efforts when preparing an OSS interconnection with Qwest and when testing enhancements to the Co-Providers existing interconnection
- Do the processes that Co-Providers are expected to use when establishing connection with the SATE and obtaining the required EDI Interoperability certification work sufficiently well and are they adequately documented for use
- Once EDI connection is established and tested, does the SATE consistently and accurately return valid responses to correctly and incorrectly entered

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<sup>14</sup> *SWBT Texas Order* at ¶ 135.

<sup>15</sup> Hewlett-Packard Company's Draft Proposal to Qwest for Evaluation of IMA-EDI SATE Processes and Documentation, Version 10, which is the final version approved by the ACC ("HP's SATE Evaluation Plan"), at § 2.1.

transactions

- To what extent and in what manner does Qwest seek Co-Provider input on SATE functional specifications and design requirements, and to what extent is this input used in Qwest's development of the SATE
- To what extent does Qwest's SATE adequately mirror the production IMA-EDI environment
- To what extent does the Qwest SATE meet the principles HP identifies as adequate for automated testing environments. Those principles include:
  - Mirror image of production – HP will evaluate the extent to which the SATE mirrors the production environment and determine if that functionality provided is adequate to support Co-Provider testing in the state of Arizona
  - Accommodation of new release testing – HP will evaluate Qwest's documentation and observe Qwest's compliance to their stated expectation to provide Co-Providers with an updated SATE at least one month prior to the corresponding production release of IMA.
  - Substantial level of Co-Provider Acceptance – HP will solicit Co-Providers for input into the usefulness of the SATE and for written statements regarding their input to the SATE.
  - Environment capacities meet Co-Provider needs – HP will evaluate the transactional data provided by the SATE in order to determine whether the data provided supports the testing requirements of the Co-Providers conducting business in the state of Arizona

Thus, the test plan HP executed in evaluating SATE is more comprehensive than those conducted on test environments that the FCC has found to be sufficient for section 271 purposes.

It is important to note that HP's actual evaluation of SATE was even more rigorous than the already-extensive testing plan. As HP testified at the workshop, even though the testing plan detailed the full extent of the evaluation HP believed was necessary to test the stated objectives,

HP exceeded the testing plan's requirements in most cases.<sup>16</sup> For example, HP's transactional testing included a broad suite of products, rather than limiting testing to those products that CLECs are currently ordering from Qwest in Arizona. In its report, HP made nine recommendations relating to SATE. Qwest submitted its response to those recommendations, including details regarding how Qwest has already addressed or is in the process of addressing the recommendations, as appropriate.<sup>17</sup>

Significantly, AT&T actually admitted that HP performed a thorough analysis of SATE. At the workshop, AT&T's witness, Ken Wilson, stated: "I think that the details in the HP document are good in identifying issues and problem areas."<sup>18</sup> As it has done so many times before, immediately after acknowledging the sufficiency of the evaluation at issue, AT&T revealed the crux of its complaints -- it simply disagrees with the vendor's conclusions. After the statement quoted above, Mr. Wilson complained: "I still disagree with their conclusions."<sup>19</sup>

HP was hired as an independent third party to evaluate SATE. After performing what AT&T admits was a thorough evaluation, HP concluded that SATE is adequate. The Commission should reject the CLECs' unfounded complaints to the contrary.

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<sup>16</sup> SATE Workshop Transcript at 84:8-20, 86:22-25.

<sup>17</sup> See Qwest's Response to HP's SATE Recommendations, submitted to the Arizona TAG email distribution list on December 28, 2001.

<sup>18</sup> SATE Workshop Transcript at 129:23-130:1.

<sup>19</sup> *Id.*



**C. The military-style testing approach does not apply to the SATE evaluation.**

At the workshop, WorldCom stated that it expected the SATE evaluation to be conducted in accordance with the military-style testing approach used for the OSS tests set forth in the MTP and TSD. There is no basis for such an expectation.

The SATE evaluation was not conducted pursuant to the MTP or TSD. Instead, the evaluation is described in a separate document, HP's SATE Evaluation Plan, which was separately approved by Staff. Section 2.2 of HP's SATE Evaluation Plan explicitly states:

HP's testing method will be a pass-fail snapshot of pre-defined criteria for SATE adequacy to support CLEC interoperability and new release testing at the time of the evaluation *rather than a military style test that iteratively pursues defects to correction.*

(Emphasis added.) Thus, the parties knew from the time the scope of the SATE evaluation test plan was discussed that military-style testing, which requires a test-until-you-pass approach, would not apply to this evaluation.

Moreover, Staff specifically determined that military-style testing does not apply to the SATE evaluation when it approved HP's SATE Evaluation Plan, which explicitly states that the evaluation would not follow the military-style testing approach. WorldCom has provided no basis for changing the approach after the evaluation is concluded and the results reported. This is particularly true because, after conducting its comprehensive evaluation, HP specifically found that SATE is adequate. No more testing, military-style or otherwise, is required.

**D. SATE is production-ready.**

As noted above, SATE was deployed July 31, 2001 and CLECs have successfully used SATE to achieve production status. Nonetheless, AT&T insists that SATE is "not yet production

ready."<sup>20</sup> There is simply no factual basis for this curious claim. Moreover, the FCC has clearly held that commercial usage demonstrating that CLECs are able to achieve production status and test new releases indicates that a testing environment is adequate.<sup>21</sup> Three CLECs have already successfully used SATE and six CLECs are currently using SATE to test new release requirements. This clearly establishes that SATE is not only "production ready," but has been implemented and successfully used -- in addition to successfully passing HP's rigorous evaluation. AT&T's arguments should be rejected.

#### **IV. CONCLUSION**

After performing a full and comprehensive evaluation, HP has found that Qwest's SATE performs the same key functions as Qwest's production environment and, therefore, is adequate to allow CLECs to test OSS changes prior to their implementation. SATE thus fully satisfies the FCC's requirements. The CLECs attacks on HP's findings are unfounded and should be rejected.

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<sup>20</sup> SATE Workshop Transcript at 20:8-9.

Dated this 18th day of January, 2002.

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<sup>21</sup> *SWBT Texas Order* at ¶ 138.

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